REMARKS

This application has been reviewed in light of the Office Action dated May 5, 2004. Claims 2 and 9-15 are pending in this application. Claim 2 is in independent form. Favorable reconsideration is requested.

Claims 2, 9, 10, 13 and 15 were rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi (US Patent 5,955,753).

Claim 2 specifies:

> "wherein the signal output line and a line having at least one function of the three functions of a selection control line for controlling said selecting means, a transfer control line for controlling said transfer means, and a reset control line for controlling said reset means, comprise a single common line in a single unit cell or between two adjoining unit cells."

As shown in applicants' Fig. 1, the electrode 15 to reset the input terminal of the amplifying means and the electrode 18 to output a signal are both connected to a common line 58 so that this common line serves as a reset control line (reset switch line) and a signal line. (specification page 15, lines 2 - 7). Thus a single line 58 can be used for both resetting the input terminal and for outputting a signal.

In Takahashi '753 the signal output line (Fig. 1 from #6 to #7) only outputs a signal. It does not control any of the functions of a selection control line for controlling a selecting means, a transfer control line for controlling a transfer means, or a reset control line for controlling a reset means. Instead, as shown in Fig. 1, the selecting means 6 is controlled by the line to ϕSo; the transfer switch 3 is controlled by the line to ϕTXo; and the resetting means 4 is controlled by the line ϕRo .

In the present invention the "signal output line" outputs a signal obtained by

amplifying a signal generated in a photoelectric conversion portion by an amplifying means, which corresponds, for example, to the vertically drawn signal lines connected to the transistors 6 and 7 in Figure 1of Takahashi '753.

Accordingly, Takahashi '753 neither discloses nor suggests the key feature of the present invention that the signal output line and a line having at least one function of the three functions of a selection control line for controlling the selection means, a transfer control line for controlling the transfer means, and a reset control line for controlling the reset means, comprise a single common line in a single unit cell or between two adjoining unit cells. The same applies to the Yonemoto '325 reference.

Although the Gowda '168 reference shows in Figure 5 turning on "RESET" and "ROW SELECT" simultaneously after t_3 and performing both reset control and select control by a common line, this reference neither discloses nor suggests that the signal output line 15 corresponding to the "signal output line" referred to in the present claims comprises that common line.

Therefore, it is clear that the cited references disclose no more than a common control line that performs reset control and select control.

A key feature of the present invention is that one of the functions of a common line is a signal output line. A signal output line, unlike a control line applied for each row, is not to obtain a signal for controlling a switch. In the present case the inventor has found that an optical signal output from a sensor unit cell (sensor pixel) can also serve as a control switch within a unit cell (pixel) by suitably designing a unit cell circuit cell (pixel circuit).

Further, since a circuit is generally designed such that a signal output line is provided in a direction different from the direction of provision of control lines, the present

invention provides a unique technical advantage that even when a signal output line is used so as to function also as a control line, there is room for layout optimization. In order to attain a configuration in which plural control lines comprise a single common line, it is necessary to provide additional lines crossing the control lines, which affects the freedom of circuit design.

In view of the foregoing, it is submitted that the references all fail to disclose or suggest the above quoted recitations of claim 2. Claims 9 - 15 are all dependent on claim 2 and incorporate the same recitations. Accordingly, claims 2 and 9 - 15 are allowable.

Regarding the rejection of claims 11 and 12 under 35 U.S.C. 103(a) as unpatentable over Takahashi in view of Yonemoto "325, it is submitted that neither of these references disclose or suggest the above quoted feature of claim 2, namely:

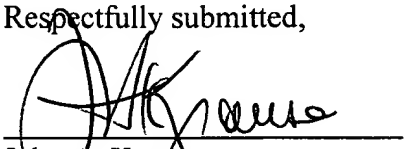
> "wherein the signal output line and a line having at least one function of the three functions of a selection control line for controlling said selecting means, a transfer control line for controlling said transfer means, and a reset control line for controlling said reset means, comprise a single common line in a single unit cell or between two adjoining unit cells."

Accordingly, claims 11 and 12 patentably distinguish over each of Takahashi '753 and Yonemoto considered both individually and in combination.

Reconsideration by the Examiner and allowance of claims 2 and 9 - 15 is respectfully requested.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



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